

AMENDMENTS TO THE CLAIMS

1. - 7. (CANCELLED).

5 8. (currently amended) A device (12) for optically
regenerating dispersion-managed (DM) soliton pulses for
use in optical propagation means comprising first
propagation means (10a) having abnormal dispersion and
second propagation means (10b) having normal dispersion,
10 said device comprising a synchronous intensity modulator
(14) serving, when placed in the vicinity of the junction
between the first and second propagation means (10a,
10b), to perform time synchronization on DM soliton
pulses passing through it and intensity fluctuation
15 stabilization on said pulses, the device being
characterized by the fact that it comprises noise
suppression means (16) for suppressing amplified
spontaneous emission noise and that are distinct from the
synchronous intensity modulator (14).

20 9. (currently amended) A device according to claim ~~1~~ 8,
in which the noise suppression means (16) comprise a
saturable absorber.

25 10. (currently amended) A device according to claim ~~18~~ ~~or~~
~~claim 2~~, in which the noise suppression means are
disposed upstream from the synchronous intensity
modulator (14) in the propagation direction of the DM
soliton pulses when the device is inserted in the
30 propagation means.

11. (currently amended) An installation for optically
transmitting DM soliton pulses, the installation
comprising:
35 - propagation means (10) comprising first
propagation means (10a) having abnormal dispersion and

second propagation means (10b) having normal dispersion;
and

- a device for optically regenerating DM soliton pulses in accordance with ~~any one of claims 1 to 3~~ claim 8; the synchronous intensity modulator (14) of the regenerator device (12) being installed in the vicinity of the junction between the first and second propagation means.
- 5.

The synchronous intensity modulator of the device claimed in the present application is adapted to filter only one wavelength, i.e. one frequency.

Consequently, even if the skilled person had tried to replace the optical band pass filter of U.S. 7,298,948 in order to provide time synchronization and intensity stabilization of pulses, he would not had use a synchronous intensity modulator because that modulator cannot filter a plurality of frequencies.

Accordingly, as the device of claim 8 of the present application is not obvious over claim 1 of U.S. 7,298,948. The rejection on the ground of non-statutory obviousness-type double patenting is therefore inappropriate and should be withdrawn.

Further, as set forth in claim 12 of U.S. 7,298,948, the regenerating device is inserted in the propagation means in the vicinity of a point where the spectrum width of the pulses reaches a maximum.

In the present application, on the contrary, Figure 1 shows that the device is inserted in the propagation means between a first optical fiber having abnormal dispersion and second propagation means having normal dispersion (claim 11). That means that the synchronous intensity modulator is installed in the vicinity of a point where the temporal width of the pulses reaches a maximum, i.e. a point where the spectrum width of the pulses reaches a minimum.

This shows that a synchronous intensity modulator and an optical band pass filter are two distinct devices that have to be located at different places of the propagation means. Consequently, those two devices are not equivalent and it would not be obvious for the skilled person to interchange one of these devices for the other.